

IN THE CLAIMS:

1. (Currently Amended) A ceramic honeycomb structure comprising a plurality of through-holes surrounded by partition walls, the ceramic honeycomb structure having an outer circumferential wall obtainable by firing a layer of a raw material applied to a circumference of the ceramic honeycomb structure wherein ~~(1)~~ a thermal expansion coefficient of ~~an~~ the outer circumferential wall portion ~~in the ceramic honeycomb structure~~ is larger than a thermal expansion coefficient, in a direction of a diameter, of an inside partition wall portion in the ceramic honeycomb structure, and stress so that, when the structure is cooled from the firing temperature, compression is applied to the inside partition wall portion from the outer circumferential wall portion, ~~(2) a raw material for said outer circumferential wall is given in a thickness sufficient to apply a stress to the inside partition walls from the outer circumferential wall around a whole surface of the outer circumferential wall, and (3) the outer circumferential wall portion has been made of a crystalline cordierite.~~

2. (Currently Amended) A ceramic honeycomb structure as defined in claim 1, wherein a material for the outer circumferential wall portion of the ceramic honeycomb structure

Serial No. 09/803,941

is the same as or different from a material for the ceramic honeycomb structure inside partition wall portion.

3. (Currently Amended) A ceramic honeycomb structure as defined in claim 1, wherein a the partition wall walls of the ceramic honeycomb structure has have a thickness of less than 0.1 mm.

4. (Currently Amended) A ceramic honeycomb structure as defined in claim 1, wherein the ceramic honeycomb structure has a cell density of the through-holes of 62 cells/cm<sup>2</sup> or more.

5. (Original) A ceramic honeycomb structure as defined in claim 1, wherein the outer circumferential wall portion is thicker than an inside partition wall portion of the ceramic honeycomb structure.

6. (Original) A ceramic honeycomb structure as defined in claim 1, wherein the ceramic honeycomb structure has an open frontal area of 86% or more.

7. (Original) A ceramic honeycomb structure as defined in claim 1, wherein the ceramic honeycomb structure has a bulk density of 0.26g/cm<sup>3</sup> or less.